

Full Length Research

Consumer Perception of Organic Food Products and Purchase Behavior of Shopping in Outlets of Retail Chains: A Pilot Study of Huntsville, Alabama

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The organic food industry is becoming an important sector across the world. The purpose of this paper is to investigate and examine consumer's perceptions and understand the knowledge towards organic food products and purchase behavior. Following the literature review the researchers designed a questionnaire for data collection that took place during the last two weeks of January 2017. Purchasers were approached during their food shopping in outlets of two retail chains in two different areas of Huntsville, Alabama. The descriptive analysis reveals a complete difference of opinion with answers on polar opposite ends of the scale; and the relatively high standard deviation also reflects a divergence of opinion by respondents on most questions, with the possible exception of *gender*. However, majority of the respondents in the age group of 35-44 years were ready to purchase organic food products. Furthermore, the majority (78.1%) of the respondents were familiar with the term "organic food" while 13% of the respondents were not familiar with the term. With regards to ever been on an organic farm, while 73.9% of the respondents said "no" and 17.4% said "yes". Furthermore, 73.9% said "yes" and 17.4% said "no" to the issue of having knowledge of where to buy organic food. However, majority of the respondents indicated "yes" to the issue of ever bought organic food or beverage product. It is concluded that there is a needs for marketing and awareness of organic food products across the age group because food selection is an important consumer behavior with many long-term consequences to the individual in the form of health and longevity and to society in the form of health cost. The marketers of organic foods need to be innovative and dynamic in order to compete with the changing purchase behavior in the organic food products market among metropolitan residents.

Keywords: Consumer perception, Organic food products, Purchase behavior, Consumer knowledge.

INTRODUCTION

There has been both a significant and major shift in the types and numbers of food retailers, manufacturers and distributors in the organic food

industry due to the rapid growth of this sector and this has consequently widened the customer base at the retail level. The retailing horizon of organic

food products has changed with traditional purveyors facing increased competition from new companies; also, organic food point of sale was now not only limited to in natural-product stores like whole foods and food cooperatives but now included in traditional supermarkets and club stores such as Wal-Mart and Costco respectively. As at 2008, organic manufacturers were either in direct competition with traditional food manufacturers or had been absorbed by these firms. The consequent effect of these changes has been twofold: both the number and average size of participating firms are now larger. One byproduct of rapid market growth has been periodic shortages of organic products due to the inability of organic farms to supply enough products to keep pace with demand. Increases in acres of certified organic farmland (the best available measure of organic production—data on actual production are unavailable) have lagged behind growth in demand and have been relatively volatile during the decade (Dimitri and Oberholtzer, 2009).

The market outlook for the organic food industry remains high. Surveys conducted by the Organic Trade Association (OTA) in 2011 found that more than three-quarters U.S. families food purchases increased by seventy three percent (73%) from 2009, while forty percent (40%) of families reported they consumed more organic food than they did a year ago. The Organic industry overview by the Organic Trade Association (OTA) in 2011 reported the food and beverage sector of the industry grew at a rate of 7.7 percent (%) with a total sales value of \$26.7 billion. This is an exponential growth of approx. 16.5 percent per year when compared to the \$ 6.1 billion sales value in 2000 (OTA, 2011). Similar trends were reported by Dimitri and Greene (2002), Klonsky and Greene (2005) who estimated an industry growth rate of approximately 20 percent between 1990 and 2006. Whereas the total U.S. food industry sale grew by a meagre 0.6 percent in 2010 of which the Organic food sales accounted for four percent of the \$673 billion food industry in the same year. Sales estimates by the OTA stand at \$43.3 billion in 2015 which shows a steady and continuous year on year growth in this sector of the food industry. Consequently, this growth has

translated in jobs with 40 percent of U.S. organic companies surveyed by the OTA in 2010 added full time jobs. This burgeoning performance by the organic food industry presents an ever-increasing opportunity for growth in revenue and consequently the creation of jobs. A Thomson Reuters-NPR poll found that younger adults between the ages of 25 and 34 are probable purchasers while consumers above the age of 65 are less likely to express interest in buying organic food. Consumers primarily purchase food from mainstream grocery stores while other markets include farmer's markets; community supported agriculture farms, specialty stores, individual gardens, online and mail purchases. Interestingly enough, several industry sponsored surveys have explored the Consumption Characteristics of the organic products market but there has been limited research on the role of age as a factor influencing consumption. This makes research investigating the potential impact of the age variable on consumer behavior may provide details on the factors that really affect organic food purchases, and consequently may help marketers promote and penetrate the food market efficiently. Hence, further clarification is necessary to improve the understanding of the factors influencing the net returns to organic farming systems particularly the role of age as a predictor of the acceptance of organic food products.

PRESENT STATE OF KNOWLEDGE/LITERATURE REVIEW

Callwood (2013), categorized the psychological factors that influence an individual's decision when purchasing as the individual's motivations, perceptions, learning and beliefs. Notwithstanding, consumer behavior may be delineated as the mental, emotional and physical activities engaged when purchasing , utilizing or disposing of products and services as a means to satisfying needs (Priest et al., 2013). Because attitudes affect intentions, the more desirable the attitude is, the greater the will and intention to carry out a particular behavior will be (Tarkiainen and Sundqvist, 2009). Furthermore, Tarkiainen and Sundqvist (2009) claim that attitudes are communicated between people and, thus, people with positive attitudes towards a product will affect the attitudes of their surrounding people. As a result of this cross over effect, subjective norms will be seen as a precursor of attitudes in this study.

Among the small number of studies that studied the subjective norms related to the purchase of organic food, it was discovered that there is an important relationship between subjective norms and attitudes. Christian (2012) explains the complexity of human decision-making with respect to purchasing organic food. His model framework is outlined with the nested structure of decision and the impact of earlier decisions has on the decisional space of later decisions. Environmental consideration has been suggested as a motivating factor. Ling (2013) evaluated consumers' intent to purchase green product as a means to examining the driving variables that influence consumers' purchase intent. Other studies indicate the relevance of socio demographic and cultural factors like, product quality, price, place of sale, ambience, country of origin and convenience in purchasing affect purchase decisions of food consumers (Van Waterschoot et al., 2008; Akpinar, et al., 2009; Gupta, 2009; Vukasovič, 2013). Shafie and Rennie (2012) suggested that future studies should go for consumer-based approach which is important not only for consumers, but also in terms of responses to changes in market dynamics.

PERCEPTION OF QUALITY

It is clear from the literature that the way consumers perceive the quality of organic food has played a big role in its rapid expansion (Essoussi and Zahaf, 2008). There is significant indication in the literature that taste quality plays a major role in influencing consumer behavior because it provides a measure by which the price premium can be justified (Shaw-Hughner et al., 2007). The price premium itself can also have the effect of creating the perception among customers that organic must be a higher quality product (Shaw-Hughmer et al., 2007; Harrison, 2009). In an interview for this paper, Chef Pierre Koffman revealed that while he didn't believe in organic food, if he did occasionally buy it, it was only because it looked beautiful and not because it's organic (Koffman, 2009).

However, when it comes to food quality, there are serious questions about the ways in which both consumers that purchase and supermarkets who market and sell are judging the overall quality of products as experienced in the UK with Tesco. When the company experimented with lowering the price of organic products slightly below the price of

its conventional food equivalent, there was an extremely low conversion rate. This means customers are likely to purchase organic in that circumstance but they are very unlikely to continue purchasing organic when the price rises again. Tesco attributes this to customers experiencing organic food and finding they cannot tell any difference in terms of quality (Pierce, 2009). Food supply expert Claire Harrison argued in an interview for this paper that quality standards for conventional food are part of the reason organic food gained prominence in the first place. Appearance and size standards set by supermarkets necessitated an increasing use of pesticides and other chemicals to meet yield requirements as well as quality standards (Harrison, 2009). Additionally, in July 2009 a landmark report released in the UK raised serious questions about the actual nutritional value of organic food over its conventional competitors. Dangour et al., (2009) found that there was virtually no nutritional difference in organic food, undermining consumer perceptions about quality.

PRICE PREMIUM

The price of organic food is clearly to play a major part in the consumers' purchasing intentions and behavior of consumers likely in the form of a barrier due the price premiums of organic produce vs. conventional. In fact, the price of organic food has been cited in many articles to be the main obstacle for not buying organic food (Shaw et al., 2007; Shafie and Rennie, 2012). This may be likely to be especially true in times of economic downturn, like those in which we currently find ourselves. One area that has been extensively researched is the willingness to pay (WTP), which has been the focus of several studies. Shaw et al., (2007) find that consumers are, for example, prepared to at least hypothetically to pay a premium for organic produce, however, they were not willing to pay the steep increase in price compared to conventional produce. Tesco's experience with price in the current economic climate has been very interesting. In most stores the shelf space dedicated to organic food has been decreasing due to falling sales.

Unsurprisingly the amount of stocked organic food was directly correlated to geographic area, so more affluent areas would stock more organic produce as consumers were more likely to purchase, Tesco's research indicates income and willingness to pay

Table 1(a). Descriptive Statistics: Mean Respondent's Socio-Economic Factors Results.

	N (Missing System)	Minimum	Maximum	Mean	Std Deviation
Gender	23	1	2	1.16	0.5
Age	23	2	8	3.87	2.17
Education	23	2	8	6.48	2.15
Household income	22(1)	1	4	2.59	0.91
People in household income	22(1)	1	5	2.91	1.27
Marital Status	22(1)	1	5	2.27	1.61

are correlated. They also tried to tactically price in order to shift stock on organics, which manifested low conversion rates with organic which seems to indicate that price is a major factor. Perceived differences is also likely to play a role here however, as consumers may not see an increased benefit in the product that is worth the price premium (Pierce, 2009).

Ozguven (2012), studied the motivation factors of consumers to buy organic food products in Izmir. Analysis revealed that consumers preferred organic milk, fruit and vegetables. The results indicated that quality and price were more explanatory factors and had more significant relationship than the other factors.

The study explores the consumer perceptions toward the purchase behavior of organic food products and the objective of this paper is to investigate and examine consumer's perceptions and understand their knowledge towards organic food products and purchase behavior.

MATERIALS AND METHODS

The research paper goal necessitated the identification of the various factors that influence the purchase of organic food. The literature review was used in the identification of potential factors affecting a consumer's purchasing behavior of organic food products. Following the literature review research phase, the researchers conducted a number of semi-structured interviews with industry experts in order to gather qualitative insight into what had been uncovered in the academic literature. To best augment the quantitative data were gathered from consumers, through the design of questionnaire survey. Data collection took place during the last two weeks of January 2017. Purchasers were approached during their food shopping in outlets of

three retail chains in two different areas of Huntsville (one outlet per chain) using a structured questionnaire. Overall, 40 people were approached, 23 of which were qualified for sample inclusion in the time frame of the survey (57.5 percent). SPSS IBM Statistics software v.23 was used for all statistical analysis.

RESULTS AND DISCUSSION

DESCRIPTIVE ANALYSIS

The socio-demographic profile of the overall sample is shown in Table 1a. The mean of each variable in Table 1a reveals respondents attitudes towards organic food products. The standard deviation shows the size of the range of answers (fairly high in almost all cases based on these results). This is further reflected by the minimum and maximum answers provided for each variable. With the exception of gender and household income, the range of answers almost universally shows a complete difference of opinion with answers on polar opposite ends of the scale. The relatively high standard deviation also reflects a divergence of opinion by respondents on most questions, with the possible exception of gender

The mean of each variable in Table 1b reveals respondents attitudes towards organic food products. The standard deviation shows the size of the range of answers (very low in almost all cases based on these results). This is further reflected by the minimum and maximum answers provided for each variable.

In Table 2 below the sample comprises 60.9 percent women something that is expected since women are the main food purchase decision-makers in households and those who mainly buy organic foods. The sample is somewhat biased towards younger ages and higher educational levels. This

Table 1(b). Descriptive Statistics: Mean Results of Respondents Knowledge and Awareness of Organic Food Products Results.

	N(Missing System)	Minimum	Maximum	Mean	Std Deviation
Familiar with Organic food	22(2)	1	2	1.14	0.359
Place to buy Organic food	22(2)	1	2	1.19	0.402
Ever buy organic food products	22(2)	1	2	1.24	0.436
Believe in organic products are healthier	22(2)	1	2	1.05	0.218
Believe in information publishing about organic advantages	22(1)	1	3	1.82	0.958

fact is the result of inclusion in the sample of only really organic aware consumers, who mostly belong to younger age groups and have higher educational levels which is also consistent with the results of previous report (Fotopoulos and Krystalla, 2000a, b). The socio-demographic profile of the overall sample is shown in Table 2 below and also discussed the findings as follows:

Age of the Respondents: Majority of the respondents with the age group of 35-44 years were ready to the purchase of the organic food products.

Gender: The willingness to purchase of the organic food products was found higher among female respondents (60.9%), while only 39.1% among male respondents. The low percentage among male respondents shows that they were not ready to purchase organic food products.

Marital Status: 56.5% of the married respondents showed willingness to purchase Organic food products if were less expensive. However, 26.1% among unmarried, divorced 8.7% and separated is 4.3% respondents were also ready to purchase organic food products.

Education: The ready to purchase Organic food products was high among the college and university education with 82.6%, whereas it was low among the respondents with high school education.

Yearly Gross Household Income: 43.6% respondents with income group of \$20,00- \$49,000 showed willingness to purchase Organic food products while 26.1% with income group of \$5,000- \$19,000 and 13% with income group of \$50,000- \$99,000 had shown willingness to purchase organic food products.

After establishing the socio-demographics of the respondents above we sought to establish the respondent's frequency of purchasing organic produce in Table 3 below. We started by asking "How often do you purchase organic food?"

The results were clearly widely distributed as one can see from Table 3 however the vast majority 78.3% (n=18) of respondents purchased organic food within the month. We divided respondents into two groups based on their purchase frequency to compare those we felt were regular organic shoppers and those who were not. A total of 65.2% of respondents regularly purchased organic (bimonthly or more frequently) and inversely 21.7% of respondents are infrequent organic shoppers and buy monthly or less often.

In Table 3 one can see that the majority (78.1%) of the respondent's familiar with the terms "organic food" while 13% of the respondents not familiar with the terms. With regards to ever been on an organic farm, while 73.9% of the respondents indicated "no" and 17.4% indicated "yes". Furthermore, 73.9% indicated "yes" and 17.4% indicated "no" to the issue of having knowledge of where to buy organic food. Majority (73.9%) of the respondents indicated "yes" to the issue of ever buy organic food or beverage product.

The analysis of main source of weekly shopping shows that the majority of the respondents' sample main source of weekly shopping for organic food is supermarket (65.2%), while they used open-air markets as alternative food outlets (26.1%). The analysis reveals that consumers who are really aware of the term "organic" can be considered typical supermarket customers.

It should be noted in Tables 1a, b above and 2, also in Table 3, the missing system suggests that all the subjects did not answer some questions

Table 2. Socio-demographic Profile of the Overall Sample.

Age group	Frequency (Percent)
- 15-24	6(26.1)
- 25-34	4(17.4)
- 35-44	9(39.1)
- 45-54	2(8.7)
- 55-64	2(8.7)
Education	
- High School (1-4)	4(17.4)
- College (1-3)	11(47.8)
- University (4+)	8(34.8)
Yearly Gross Household Income	
- < \$5,000	3(13)
- \$5,000-\$19,000	6(26.1)
- \$20,000-\$49,000	10(43.6)
- \$50,000-\$99,000	3(13)
Missing System	1(4.3)
Gender	
- Male	9(39.1)
- Female	14(60.9)
Marital Status	
- Single	6(26.1)
- Married	13(56.5)
- Separate	1(4.3)
- Divorced	2(8.7)
Missing System	1(4.3)
Number of People that live in present house	
- 1	4(17.4)
- 2	4(17.4)
- 3	6(26.1)
- 4	6(26.1)
- 5	2(8.7)
Missing System	1(4.3)

that were included in the organic food purchase database.

After analyzing the questioning purchasing behavior, the particular product that was being

Table 3. Frequency regarding knowledge/ Awareness of organic Foods.

• Familiarity with the terms	Frequency (Percent)
- Yes	18(78.3)
- No	3(13)
Missing System	2(8.7)
• Ever been on an organic farm	
- Yes	4(17.4)
- No	17(73.9)
Missing System	2(8.7)
• Where to buy organic food	
- Yes	17(73.9)
- No	4(17.4)
Missing System	2(8.7)
• Ever buy organic food or beverage product	
- Yes	17(73.9)
- No	5(21.7)
Missing System	1(4.4)
• Organic Food Purchase	
- Weekly	10(43.5)
- Fortnight	2(8.7)
- Less than month	3(13)
- Monthly	3(13)
- Once in a year	2(8.7)
Missing System	3(13)
• Reason why not purchase Food or beverage product	
- Too Expensive	13(56.5)
- Not enough choice	2(8.7)
- Don't like the image/ packaging	1(4.3)
- Don't like the taste	4(17.4)
Missing System	3(13)
• Main source of weekly shopping	
- Hypermarket	1(4.3)
- Supermarket	15(65.2)
- Open market	6(26.1)
- Other	1(4.3)

purchase was examined. We asked: "Which of the following types of organic food do you purchase?" The results in Table 4 clearly show that the majority of respondents purchased vegetables and fruit. However, meat, dairy, poultry and breads were also popular. The least popular were bakery, grape, herbs, and nuts convenience meals and confectionary. These results were generally consistent with other similar surveys.

CONCLUSION

Overall, consumers' perceptions and behavior play a major role in the purchase and use of organic food products. The survey in this study, which used a pilot to sample consumers' perception clearly show that the majority (73.9%) of the respondents in Huntsville, Alabama, purchased vegetables and fruit. However, dairy and poultry are also popular

Table 4. Types of Organic Foods Purchased.

Types	Frequency (Percent)
Vegetables	17(73.9)
Fruits	17(73.9)
Dairy Milk	6(26.1)
Poultry	10(43.5)
Meat	10(43.5)
Beverages	3(13)
Cereals	8(34.8)
Bakery	2(8.7)
Mushroom	3(13)
Grape	2(8.7)
Nuts	2(8.7)
Honey	4(17.4)
Herbs / Medicaments	2(8.7)
Fisher	5(21.7)

with 43.5%. Furthermore, the majority of respondents purchased organic food within the past month and the analysis reveals those consumers who are really aware of the term “organic” food can be considered typical supermarket customers. The authors are sufficiently satisfied that sample of Huntsville consumer behavior serves as a good indicator of the amount by which certain variables have an impact on purchase behavior and there is a needs for marketing and awareness of organic food products across the age group because food selection is an important consumer behavior with many long-term consequences to the individual in the form of health and longevity and to society in the form of health cost. The marketers of organic foods need to be innovative and dynamic in order to compete with the changing purchase behavior in the organic food products market among metropolitan residents. However, the demand for organic products is accompanied by the consumers’ perception and belief that organic food products are healthier.

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REFERENCES

- Akpınar MG, Aykin SM, Sayin C and Ozkan B (2009). The role of demographic variables in purchasing decisions on fresh fruit and vegetables. *J. Food Agric. Environ.*, 7(3&4):106 – 110.
- Callwood K (2013). Psychological Factors That Influence Consumer Buying Behavior. Retrieved from http://www.ehow.com/list_7599973_psychological-influence-consumer-buying-behavior.html
- Christian AK (2012). Should I Buy Organic Food? A Psychological Perspective on Purchase Decisions, Organic Food and Agriculture - New Trends and Developments in the Social Sciences, Dr. Matthew Reed (Ed.), ISBN: 978-953-307-764-772,
- Dangour, Alan et al. (2009). Comparison of composition (nutrients and other substances) of organically and conventionally produced foodstuffs. Report for the Food Standards Agency. Nutrition and Public Health Intervention Research Unit London School of Hygiene and Tropical Medicine. July 2009.
- Dimitri C and Greene C (2002). Recent Growth Patterns in the U.S. Organic Foods Market. Agriculture Information Bulletin, No. 777. Washington, D.C.: U.S. Department of Agriculture, Economic Research Service.
- Dimitri C and Oberholtzer L (2009). Marketing U.S. Organic Foods: Recent Trends From Farms to

- Consumers. Economic Information Bulletin No. 58. U.S. Dept. of Agriculture. Economic Research Service. September.
- Essoussi LH, Zahaf M (2008). Decision making process of community organic food consumers: an exploratory study. *J. Consumer Market*, 25(2): 95-104.
- Fotopoulos C and Krystallis A (2002a). Organic product avoidance: reasons for rejection and potential buyers' identification in a country-wide survey. *Br. Food J.*, 104 (3-5): 233-260.
- Fotopoulos C and Krystallis A (2002b). Purchasing motives and profile of the Greek consumer: a country-wide survey. *Br. Food J.*, 104 (9): 730-265.
- Gupta KB (2009). Consumer behaviour for food products in India, paper presented in 19th Annual World Symposium of International Food and Agribusiness Management Association, held at Budapest, Hungary (June, 20 – 21) available at https://www.ifama.org/events/conferences/2009/cms/docs/1063_paper.pdf $\Sigma\theta\acute{\alpha}\lambda\mu\alpha!$ $\text{H}\alpha\nu\alpha\theta\omicron\rho\acute{\alpha}$ $\eta\eta\varsigma$ $\sigma\pi\epsilon\rho\text{-}\zeta\acute{\upsilon}\nu\delta\epsilon\zeta\eta\varsigma$ $\delta\epsilon\nu$ $\epsilon\acute{\iota}\nu\alpha\iota$ $\acute{\epsilon}\gamma\kappa\omicron\rho\eta$. on 23rd November, 2012).
- Harrison C (2009). Interview. (Conducted by Jay Dickieson and Victoria Arkus). 3 August 2009. London, UK.
- IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.
- Klonsky K and Greene C (2005). Widespread Adoption of Organic Agriculture in the US: Are Market-Driven Policies Enough? Selected Paper presented at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, July 24–27.
- Koffman P (2009). Interview (Conducted by Jay Dickieson and Victoria Arkus). 3 August 2009. London, UK.
- Ling CY (2013). Consumers' purchase intention of green products: an investigation of the drivers and moderating variable, Malaysia.
- Organic Trade Association (2011). Seventy-eight percent of U.S. families say they purchase organic foods. (www.organicnewsroom.com/2011/11/seventyeight_percent_of_us_fam.html). Accessed October 2016.
- Organic Trade Association (2011). U.S. Organic Industry Overview. (www.ota.com/pics/documents/2011OrganicIndustrySurvey.pdf). Accessed October 2016.
- Ozguven N (2012). Organic foods motivation factors for consumers. *Procedia Soc. Behav. Sci.*, 62: 661-665.
- Pierce D (2009). Interview (Conducted by Jay Dickieson and Victoria Arkus). 3 August 2009. London, UK.
- Priest J, Carter S and Statt D (2013). Consumer Behavior. Edinburgh Business School Press, United Kingdom.
- Shafie FA, Rennie D (2012). Consumer perceptions towards organic food. *Procedia Soc. Behav. ci.*, 49: 360–367.
- Shaw-Hughner R, Pierre McDonagh, Andrea P, Clifford J, Shultz II and Julie S (2007). Who are organic food customers? *J. Consumer Behav.*, 6: 94110.
- Tarkiainen A and Sundqvist S (2009). Product involvement in organic food consumption: Does ideology meet practice? *Psychol. Market.*, 26: 844-863.
- Van Waterschoot W, Sinha P K, Van Kenhove P and De Wulf K (2008). Consumer learning and its impact on store format selection. *J. Retailing and Consumer Serv.*, 15(3): 194 – 210.
- Vukasovič T (2013). Attitude towards organic meat: an empirical investigation on West Balkans Countries (WBC) consumers. *World's Poultry Sci. J.*, 69(3): 527-539.